



MOVIN' ON CAPSULE ON SUSTAINABILITY - OVERVIEW

VIDEO TRANSCRIPT

Julie Sweet

Across industries, companies are undergoing two fundamental transformations...
... a technology... and a sustainability transformation.

In a time of exponential change, they need to do both...and at the same time these engines for growth will power a new era of competitive advantage.

Companies who find a way to leverage both are 2.5 times more likely to be among tomorrow's strongest-performing businesses.

PAUSE

The stakes are high...
... the urgency and opportunity for dual transformation in the mobility sector are unparalleled...

By 2030, we need to reduce absolute carbon emissions in the mobility sector by at least 50%...
...if we are to limit the global temperature increase to 1.5°C, in line with the Paris agreement.

We also need to dramatically reduce resource consumption throughout the mobility ecosystem

Through technology and innovation, the mobility sector can deliver on these goals...
...and create new sources of value.

Alexander Holst script

Global demand for car-based mobility is likely to increase by 70% by 2030... But, as Julie mentioned...
...the sector needs to reduce absolute carbon emissions by at least 50% over the same time period.

So how are we going to achieve this?

It's not all doom and gloom...
... much is being done to solve the tension between more mobility and more sustainability.

The shift from the fossil fuel-driven internal combustion engine to renewable fuel sources and electrification has become an imperative...
...electrification of the drivetrain combined with the use of renewable electricity has the potential to reduce carbon emissions by two-thirds. But the industry must go further.

Companies increasingly understand the importance of looking beyond the use phase of cars.
... many are now adopting circular manufacturing processes ...
...to help reduce both carbon emissions and the consumption of scarce resources throughout the entire value chain.

How we design, manufacture, use and treat cars at their end of life will play an important part.



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However, more progress is needed... and we must look to the phenomenal advances in technology to achieve a net-zero circular automotive industry ii... or better...

Can you imagine a future car that contributes positively to the environment...?

So let's take a look at three technologies in particular...
...which are having a significant impact across the value chain...

Let me start with digital twin technology...

Also referred to as a virtual twin, this technology is a real-time virtual replica of a product, platform, or ecosystem.

It can model, visualize, predict, and provide feedback on product properties and behaviors.

The digital twin is already being widely applied throughout the automotive industry...
for example, in the development of electric vehicle batteries, product developers are using data on CO2 to improve carbon efficiency and abrasion data to enhance material efficiency and manufacturers of electric vehicle batteries and components report a potential of 20 – 30 percent life extension for the batteries.iii

In R&D the digital twin technology replaces physical prototypes thereby reducing resource use, carbon emissions, costs, ...and time-to-market.

As a result, more testing becomes economically viable which can enhance the quality and efficiency of products.

This key technology also facilitates the development of autonomous vehicles...
...providing extensive and important training data from testing in simulated environments.

And improves product lifecycle management...
...transforming research and development processes..

The second key technology is digital product passport...

It is closely linked to the digital twin...
... it provides a virtual identity, or stamp, to a product...
...enabling a wide range of stakeholders across the value chain to share information on product material content, flow and condition...

The digital product passport relies on...
(Words to appear on screen highlighted in bold below)
... unique identifiers such as QR codes and sensors to automatically update information,
...cloud technology for storage
... and blockchain technology to enable trust.

But how is the digital product passport being used in the automotive industry?

Well, let's think about repairing or recycling a car...
...even though it's possible to understand the



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composition of a particular car model, components will most likely have been changed out during the car's lifetime... ...causing some obvious issues when it comes to repairing or recycling.

This is where the power of the passport comes into play...

Information about the car's components are stored in the cloud, accessible via a unique product ID...

This information provides detail that facilitates the servicing of the car... helping to accurately access parts to be repaired or ...get them into the right channels for remanufacturing and recycling ...enabling a higher value circular economy.

Pretty impressive right?

Lastly, I would like to talk about new technologies that advance end-of-life treatment and recycling.

This includes collection, disassembly, sorting, reverse logistics and recycling itself.

Let's look at an example... ... just consider the number of hours required to take a car apart, manually. Not to mention the tedious nature of the task!

Sorting robots can reduce the time to half that of human sorting.

Combining computer vision and deep learning, sorting robots can recognize the

unique characteristics of material...

Saving time and improving accuracy and consistency.iv

The benefits are significant...

Car recyclers can streamline the actual recycling process...

... which helps to improve the quality and value of recycled materials.

Car manufacturers therefore have access to more and higher-quality recycled materials... ...helping them to improve circularity and reduce carbon intensity.

Jean Marc Ollagnier

These are just 3 examples of how technology can impact the entire value chain.

From Research & Development, to Manufacturing to End of Life treatment and recycling...

...other technologies such as...IoT, 5G, Edge Computing, Artificial Intelligence...

...are enabling the reinvention of the mobility sector.

These technologies provides enormous potential to decarbonize at speed and at scale.

... the share of recycled materials in cars could potentially double by 2030...

By improving end-of-life technologies.

Technology also presents a major opportunity for mobility companies to



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redefine their role and reshape demand and mobility usage.

For consumers, this means more sustainable, circular, and efficient mobility...

For governments and citizens, enhanced traceability and transparency will create trust and give them confidence that climate issues are being addressed...

New business models and cross-industry ecosystems will lead to more innovation and efficiency.

This technology-powered transformation requires each C-level to reflect on some key questions:

- What is our purpose? How do we create value for all stakeholders?
- How do we embed technology and sustainability at the heart of our strategy and investments?
- How do we work collaboratively across the ecosystem?
- How do we share data in a consistent and responsible way?

The mobility sector is uniquely positioned to play a leading role in accelerating the transition towards a low-carbon and circular economy.

Thank you, Jean-Marc and Alexander...

So, where do companies and their partners need to start?

First, raise your ambitions and consider the full value chain when aiming to leverage technology for sustainability impact.

Think about the combinatorial benefits of technologies beyond industry silos.

Secondly, be ready to rewrite the fundamental rules of your business.

Success with breakthrough technologies often requires a new type of value chain, operating model and business model. ...Be ready to change these based on your values.

Thirdly, collaborate and then collaborate again! ... the stakes are high but real success can only be achieved through close partnerships.

The technologies we highlighted today are just a snapshot...

The road ahead is tremendously exciting...

At Accenture we truly believe in the power and promise of technology ... to bring about transformational, sustainable change and create long-lasting value ... together with our Movin'On partners.

Let's take this journey together.



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